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Radiation sensitive compsns. providing relief images of increased resolution - consists of resin binder e.g. polyphenol- based resin, acid generating cpd. and complexing polar cpd., used for controlling diffusion of photo-generated acid
Patent Assignee: SHIPLEY CO INC (SHIL); SHIPLEY CO (SHIL); SHIPLEY CO LLC (SHIL)
Inventor: LAMOLA A A; THACKERAY J W
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Abstract (Basic): EP 537524 A

The compsn. comprises (A) a resin binder, (B) an acid generator cpd., and (C) a complexing polar cpd.

Also claimed are: (1) a process for enhancing resolution of a photoacid-generating compsn. in which a polar cpd., pref. (C), is added to the compsn., the pka of (c) being 8.0 or less; (2) a process for controlling acid diffusion of a photoacid-generating compsn. by adding a polar cpd. to the compsn. and applying the resulting layer to a substrate; exposing to activating radiation to generate a latent image consisting of acid gps. complexed with the polar cpd.; and treating the exposed compsn. to produce acid; and (3) a process for forming a relief image in which a layer of the radiation sensitive compsn. is applied to a substrate, and exposing and developing the yield a relief image; the compsn. consisting of (A), (B) and (C).

USE/ADVANTAGE - The compsns. are applied to substrates used in processes involving coating with photoresists, e.g. application over silicon/silicon dioxide wafers for the prodn. of microprocessor and other integrated circuit components. A further suitable use of the compsn. is as a planarising layer or for formation of multiple layers. Loss of contrast due to the effects of acid diffusion during post exposure residence times is effectively controlled. Relief images are formed having enhanced resolutin p

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